

OLD FOREST INSECTS NOTED FROM SOME BERKSHIRE PARKLANDS

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During the spring and summer of 1988 I carried out a brief survey of some 20 parklands in Berkshire for the Nature Conservancy Council (NCC) to assess their interest for wildlife, chiefly for invertebrates associated with mature woodland. Some parklands, those which have an unbroken continuity of old trees stretching back centuries, are known to be important refugia for relict 'old forest' communities (Harding & Rose, 1986). The survey concentrated on parks of known interest for old forest lichens, based on a survey by Bowen (1988), and on parks with mediaeval origins as listed in Cantor (1983). In most cases, a single visit only was made to each park, in April or May, but those with obvious potential were visited more often, and later into the season, and the most promising sites were visited several times. Malaise traps and water traps were also used at two of the most promising sites, though in general these added little information on the presence of old forest species (in the taxa examined) to that already gleaned by the general collecting techniques (beating, sweeping and direct examination of timber and flowering hawthorns) used throughout. Nearly all the parks visited are in private ownership and lack public access, and anyone intending to visit them should approach the owners beforehand. This would best be done through the NCC county officer, by whom the initial contacts for this survey were established.

The list of parks that follows is accompanied by records of the old forest Coleoptera (*sensu* Harding & Rose, 1986), ancient woodland hoverflies (*sensu* Stubbs & Falk, 1986) and other woodland insects of interest for their generally acknowledged association with mature woodland noted during the survey, with a few additional records as indicated. From the list of old forest Coleoptera, an 'index of ecological continuity' (EIC) has been calculated for each park using the method described by Alexander (1988) whereby the presence of a Harding and Rose strong indicator (H1) species scores 3 points, a good indicator (H2) scores 2 and a weak indicator (H3) scores 1; the EIC is the sum of these scores. Alexander suggests that an index of 20 or more indicates a site of national importance, though adds that if a single visit produces an index of 6 or more then the site has considerable potential. Of the 20 parks surveyed, 13 appear to have no interest for old forest Coleoptera, six have some interest. Only Englefield Park appears to be a site of great interest, though on current information it does not appear to be of national interest, despite the presence of two Red Data Book (Shirt, 1987) species, *Tomoxia biguttata* (Grll.) and *Grammoptera ustulata* (Schall.). Englefield is the only one of the 20 parks surveyed that Harding (1978) included in an inventory of parks of likely conservation value for the invertebrate fauna the mature woodland, based largely on some early 20th century records from 'Bradfield'. Of the six species of interest recorded then (*Abraeus granulatum* (Er.), *Cicones variegata* (Hell.), *Ischnodes sanguinicollis* (Panz.), *Oxyaenus variolosus* (Duf.), *Ptenidium gressneri* (Er.) and *Pediacus dermestoides* (F.)), only the last of these was found during the present survey; it is not clear whether this reflects a genuine extinction, though this seems at least possible given the small number of large old stumps present in the park today. Wasing Park is the second highest scorer, though it took several visits to reach this rather low IEC. It has one Red Data Book species, *Grammoptera ustulata*. The point that perseverance may be

needed even in the better parks is well illustrated here, since on the first visit Wasing did not produce a single old forest species, though the habitats present and its history suggested that it ought to support species of interest, as it clearly does. In general, it would be wrong to conclude, in the absence of a high IEC, that a site is not important for old forest species, unless there is evidence of lack of suitable habitat or unfavourable history. What one can be sure of is that high-scoring sites are important for old forest species.

The list of ancient woodland hoverflies provides an interesting comparison, since if a similar index were calculated based on this group, a very different ranking would result, with, for instance, Welford Park and Aldermaston Court coming out at the top of the league instead of well down it. This probably reflects the differing habitat requirements of the two groups: in general terms, the hoverflies listed are those that favour damper areas with more semi-natural habitat than a scatter of over-mature parkland trees can provide, rich though such areas can be for Coleoptera. All but *Didea fasciata* (Macq.) are thought to breed in damp timber. The parks with long lists of ancient woodland hoverflies are those with mature trees in damp valleys or along rivers, providing adequate continuity of damp timber. Thus an index based on Coleoptera is probably most suitable for open parkland with scattered trees, whereas one based on hoverflies might be more appropriate for true woodlands and other well-wooded sites.

It is worth noting that there is not an automatic correlation between parks that are valuable for old forest lichens and those that are valuable for old forest invertebrates. This is well illustrated in Berkshire, where the better parks for lichens are largely in the less polluted west of the county, though none of these western parks were found to be of great interest for the invertebrates. In contrast, Englefield Park, further east, is considered by Bowen to be of only local conservation value for lichens, though it is clearly the most valuable of the parks surveyed for invertebrates. It also appears that lichens are capable of surviving in small fragments of mature timber habitat that seemingly do not support diverse assemblages of invertebrates, for instance Chilton and Woolley Parks, both of which are considered to be of regional lichenological importance.

Aldermaston Court. Mediaeval parkland (earliest ref. 1202) with remnants of 17th c avenues. Now with scattered ancient hollow oaks amongst ungrazed bracken and scrub, areas of more formal parkland, and belt of woodland. 12 visits, IEC = 1. Coleoptera: *Pediacus dermestoides* (F.) (H3), common in recently felled mature oak. Syrphidae: *Chalcosyrphus nemorum* (F.) common in willow carr areas; *Criorhina asilica* (Fall.), several on hawthorn blossom; *Criorhina berberina* (F.), common on hawthorn blossom; *Criorhina ranunculi* (Panz.), one on hawthorn blossom; *Didea fasciata* (Macq.), one on hawthorn blossom; *Xylota florum* (F.), one in willow carr. Also *Lasius brunneus* (Latr.) (Hym: Formicidae) on one tree in 17th c oak avenue.

Basildon Park. Eighteenth century landscape park, garden and woodlands, now with very few old trees and many exotics scattered amongst improved park grassland. 2 visits, IEC = 1 (but *4). Includes *records from National Trust Biological Survey, 1986. Old forest Coleoptera: **Sinodendron cylindricum* (L.) (H3); **Ctesias serra* (F.) (H3); **Pyrochroa coccinea* (L.) (H3); *Phymatodes testaceus* (L.) (H3). Ancient woodland Syrphidae: *Brachyopa* sp., one (not caught) on beech trunk; **Brachypalpoides lenta* (Meig.); *Ferdinandea cuprea* (Scop.), one on beech trunk; **Xylota sylvarum* (L.). Also *Lasius brunneus* (Latr.) (Hym: Formicidae) on the only old oak tree; **Ctenophora pectinicornis* (L.) (Dip: Tipulidae).

Benham Park. Eighteenth century landscape park and garden of mediaeval

origin (earliest refs 1086 and 1349). Now with very few old trees and a few exotics scattered amongst improved park grassland. 2 visits, IEC = 0. Only species of interest was *Allochernes wideri* (Koch) (Pseudoscorpiones), one in woodmould of recently fallen ash.

Caversham Park. Remnants of 17th century park surrounding 19th century house. Mediaeval in origin (earliest ref. 1223). Now with no old trees and partly built over. 1 visit, IEC = 0. No species of interest.

Chilton Park. Open parkland of uncertain origin, now with very few old trees and many exotics scattered amongst improved pasture. 2 visits, IEC = 0. No species of interest.

Denford Park. Remnants of parkland of uncertain origin, with a few old trees, now partly in agricultural use. 1 visit, IEC = 0. No species of interest.

Donnington Grove. Eighteenth century landscape park and garden, now with a few old trees, mostly in agricultural land, and in wooded riverside area. 1 visit, IEC = 0. Ancient woodland Syrphidae: *Chalcosyrphus nemorum* (F.), very common around waterlogged alder logs by river; *Criorhina berberina* (F.), one on hawthorn blossom; *Criorhina ranunculi* (Panz.), one on hawthorn blossom; *Xylota sylvorum* (L.), several around waterlogged alder logs by river.

Elcot Park. Wooded gardens and open pasture of uncertain origin, now with few old trees. 1 visit, IEC = 0. Ancient woodland Syrphidae: *Xylota sylvorum* (L.), one on foliage in garden.

Englefield Park. Medieval park (earliest ref. 1588), still with areas of wood pasture stocked with fallow and red deer. Areas of mature trees but some recent timber removal. 11 visits, IEC = 16. Old forest Coleoptera: *Sinodendron cylindricum* (L.) (H3), several in damp-rotted stump; *Ampedus elongatulus* (F.) (H3), one swept from beneath old beech pollard; *Stenagostus villosus* (Fourec.) (H3), larvae common in logs, one adult beaten from oak foliage; *Pediacus dermestoides* (F.) (H3), common under bark of fallen oak and beech; *Triplax aenea* (Schall.) (H3), one under bark of year-old cut beech stump; *Mycetophagus atomarius* (F.) (H3), several under bark of fallen beech; *Bitoma crenata* (F.) (H3), common under bark of fallen oak and beech; *Prionychus ater* (F.) (H3), larvae presumably of this species in rotting stumps; *Pyrochroa coccinea* (L.) (H3), one beaten from old sweet chestnut, *Pyrochroa* sp. larvae common under bark of fallen beech; *Tomoxia biguttata* (Gyll.) (H1), several flying and running around year-old cut beech stump; *Ischnomera cyanea* (H3), one beaten from oak foliage; *Grammotera ustulata* (Schall.) (H1), one beaten from oak foliage. Ancient woodland Syrphidae: *Chalcosyrphus nemorum* (F.), one on old log; *Criorhina berberina* (F.), one on hawthorn blossom; *Ferdinandeia cuprea* (Scop.), one on buttercup; *Xylota sylvorum* (L.), one on recently cut stump. Also *Lasius brunneus* (Latr.), commonly beaten from hawthorns and oak foliage; *Ctenophora pectinicornis* (L.), one ovipositing in splits in bark of fallen oak.

Inholmes Park. Open parkland of uncertain origin, with few old trees and some exotics, mostly amongst improved pasture. 1 visit, IEC = 0. No species of interest.

Midgham Park. Wooded gardens and open parkland of uncertain origin, now with few old trees and some exotics, mostly in agricultural land. 1 visit, IEC = 0. Ancient woodland Syrphidae: *Criorhina ranunculi* (Panz.), one on hawthorn blossom.

Park Place. Late 18th century landscape park and gardens on medieval site (earliest ref. c1250), now with very few old trees and largely in agricultural use. 1 visit, IEC = 0. *Ctenophora bimaculata* (L.) (Dip: Tipulidae), pupa in woodmould at base of hollow stump of old horse chestnut.

Prospect Park. Nineteenth century park developed around 18th century house,

now with no old trees and many exotics, and mostly given over to recreation grounds. 1 visit, IEC = 0. No species of interest.

Sandleford Priory. Remains of early 18th century landscape park developed around 13th century priory, now with few old trees in Priory grounds; rest of park now returned to agriculture. 1 visit, IEC = 0. No species of interest.

Swallowfield Park. Remains of 18th century parkland developed around 17th century house on mediaeval site (earliest ref. 1232). Now with few old oaks in agricultural land. 2 visits, IEC = 4. *Tillus elongatus* (L.) (H3), one in rotting small branch of old oak; *Silvanus unidentatus* (Ol.) (H3), one under bark of recently cut oak log; *Pseudocistela ceramboides* (L.) (H2), one beaten from oak foliage. Ancient woodland Syrphidae: *Ferdinandea cuprea* (Scop.), one on hawthorn blossom. Also *Lasius brunneus* (Latr.), colony in one old oak.

Wasing Park. Original house and gardens developed in 18th century; parkland may be older. Now with few old oaks in parkland and agricultural land. 7 visits, IEC = 6. Old forest Coleoptera: *Sinodendron cylindricum* (L.) (H3), one under loose bark of old oak; *Melasis buprestoides* (L.) (H3), one swept from beneath old oak; *Thanasimus formicarius* (L.) (H3), one on trunk of old oak; *Grammoptera ustulata* (Schall.) (H1), one beaten from old oak foliage. Also *Lasius brunneus* (Latr.), colony in one old oak.

Welford Park. Open parkland of uncertain origin. Now with no old trees in improved pasture, but with well wooded riverside. 3 visits, IEC = 1. Old forest Coleoptera: *Pyrochroa coccinea* (L.) (H3), one on foliage below old beech. Ancient woodland Syrphidae: *Brachyopa* sp., larvae in slimy sap-run on old horse chestnut; *Brachypalpoides lentus* (Meig.), one on hawthorn blossom; *Chalcosyrphus nemorum* (F.), common around riverside trees; *Criorhina berberina* (F.), several on hawthorn blossom; *Criorhina floccosa* (Meig.), one on hawthorn blossom; *Didea fasciata* (Macq.), one on hawthorn blossom; *Ferdinandea cuprea* (Scop.), one on rotten log; *Xyloa sylvanum* (L.), several around recently cut sycamore log. Also *Ctenophora bimaculata* (L.), one swept from trunk of beech pollard, and one pupa found in rotten beech log.

Whiteknights Park. Open parkland of uncertain origin. Now with few old trees, though fringe well wooded; parkland partly given over to recreation grounds. 1 visit, IEC = 0 (but *3). *Record (1975–86) from Biological Records Centre at Reading Museum. Old forest Coleoptera: *Tomoxia biguttata* (Gyll.) (H1).

Woolhampton Park. Medieval parkland (earliest ref. 1304). Now with few old trees, and many exotics, mostly in improved pasture. 1 visit, IEC = 0. No species of interest.

Woolley Park. Parkland (formerly deer park) of uncertain origin. Now with very few trees apart from a few beech pollards in woodland belt. 1 visit, IEC = 0. Ancient woodland Syrphidae: *Criorhina berberina* (F.), one on foliage near old beech pollards.

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 BOOK REVIEWS

Butterflies and day-flying moths of Britain and Europe, by Michael Chinery. 322pp with over 1600 colour figures, Collins new generation guide, 1989, hardback £12.25, paperback £9.00.

This book is a successor to the widely known *Field guide to the butterflies of Britain and Europe* in its many editions from 1970 to 1980, by L. G. Higgins and N. D. Riley, and to its up-dated and expanded version by Lionel Higgins and Brian Hargreaves published in 1983. Hargreaves has been responsible for the artistry of the colour figures in all of these previous books and also, with other artists, for most of those in this new book. Despite its connection with its predecessors, this book differs in many respects besides the addition of the day-flying moths. The text is strictly confined to the British Isles and western and southern Europe as far as the Soviet Republics of Russia, the Ukraine and Romania. It therefore makes no mention of some 34 species and about as many sub-species found only in Africa north of the Sahara or the Canary Islands, Madeira or the Azores, which were previously listed, presumably because they belong to the same western Palaearctic fauna as those in Europe. A foreword by Sir David Attenborough and the author's preface state its broad aim of giving to general naturalists both a guide to the identification of species and a fuller understanding of the lives and behaviour of butterflies and moths. To that end more than two-thirds of the book are devoted to description and illustration by colour figures. Separate sections describe their origins and evolution, physiology and transformation from eggs to adults, hibernation and migration etc. There is also a useful two-page glossary and an index which contains, rather uncomfortably, both vernacular and scientific names, the latter arranged under the genera used in the text but without mention of forms or varieties discussed in the text.

The core of the book, 174 pages, lists 355 species of butterflies and about 220 moths